

MORGOS, V.

"Coal grinding mill with a new type combustion chamber." p. 272.

STAVIVO. (Ministerstvo stavebnictvi). Praha, Czechoslovakia, Vol. 33,  
No. 8, Aug. 1955.

Monthly List of East European Acquisitions (EEAI), LC, Vol. 6, No. 8,  
August 1959.  
Uncla.

MORGOS, V., inz.; AUGUSTIN, I., inz.

Chemically bonded basic materials used for rotary cement kiln  
linings. Stavivo 41 no. L 19-22 Ja '63.

I. Slovenske magnesitove zavody, n.p., Kosice.

VENKOV, Mikhail Yefimovich; VASIL'YEV, Yury Vasilevich;  
S.I. S.V., L.M., T.S.

[Improved electric feed drive for metalcutting machines  
with a D = 2000 speed variation range] Osverkleniye vane-  
ryi elektroprivoda peremennoi metallorezashchini stankov s  
dlapozonnoi izmenenii skorosti D = 2000. Leningrad, 1972.  
22 p.  
(MIA 17:11)

VERKHOLAT, Mikhail Yefimovich; MORGOVSKIY, Yuliy Yakovlevich;  
SMIRNOVA, L.N., red.

[Choice of automated electric drives for mechanisms with a wide range of speed variation] Vybor avtomatizirovannogo elektroprivoda dlia mekhanizmov s shirokim diapazonom izmenenija skorosti. Leningrad, 1964. 34 p. (MIRA 18:3)

MORGUL<sup>1</sup>, Ye.; YANGOLANKO, A.; DITYASHEVA, T.

Use of phosphates in sausage manufacture. Mias. Ind. SSSR 30  
no. J:44-45 '59. (MISA 12:9)

I. Stalinskiy myasokombinat.  
(Sausages)

MORJUL', Ye.; YANOVSKIY, A.

Introducing modern equipment and technology. Kras.Ind.SSSR 31  
no.3:35 '60. (MIRA 13:9)

1. Stalinskij myasokombinat.  
(Stalino (Stalino Province)--Meat industry--Equipment and supplies)

ADAMOVICH, L.P.; MORGUL'-MESHKOVA, O.V.; YUTSIS, B.V.

New analytical reagent, Alberon, and its interaction with  
beryllium ions. Zhur.anal.khim. 17 no.6:678-684 S '62.  
(MIRA 16:1)

1. Khar'kovskiy gosudarstvennyy universitet im. I.M.Gor'kogo.  
(Beryllium—Analysis) (Alberon)

MORGULEC, J.

Morgulec, J. Experiences of the past sprat and small-herring season and the tasks of processing sprat and herring in 1955. p. 10.

GOSPCDARKA RYBNA

Vol. 7, no. 5, May 1955      Warszawa, Poland

SO: Monthly List of East European Accessions, (KEAL), LC, Vol. 5, No. 10 Oct. 56

KOROLEC, J.

Sprat preserves in Norway. p. 14. GOSPODARKA BYTNA (Polskie Wydawnictwa Gospodarcze) Warszawa. Vol. 7, no. 10, 1955.

So. East European Accessions List. Vol. 5, no. 1, Jan. 1956

MORGULEC, J.

Proper assignments for fish processing industries, regional industry,  
and cooperative. p.7 Vol y, no. 8, Aug. 1955

SOURCE: East European Accessions List (EEAL), LC, Vol .5, No. 3, March 1956

8(6)

AUTHOR:

Morgulev, G.A., Engineer

SOV/91 59-9-8/33

TITLE:

The Fuel Feed System of the Melidovskiy Power Train  
P-4000

PERIODICAL: Energetik, 1959, Nr 9, p 16 (USSR)

ABSTRACT:

The coal bunkers of the P-4000 power train, which is operated on the Melidovskye coal deposit, are supplied by scraper conveyors SRK-11 and ST-6, as shown in a diagram. Bulldozers transport the coal to the first SKR-11 conveyor which is about 50 m long. From this conveyor the coal is fed to scraper conveyor ST-6 which supplies the coal crusher DDZ-1. Another 37 m long SRK-11 conveyor transports the coal from the crusher to two 25 m long ST-6 conveyors which feed the three bunkers of the boilers. The entire coal conveying system, including the coal crusher, costs 85,000 rubles. During 18 months of operation, the fuel feed system proved its reliability. There is 1 diagram.

Card 1/1

AUTHORS: Krasnykh, I.F. and Morguler, M.S. SOV/153-59-5-5/31

TITLE: Remarks on the Paper by A.G. Gerasimov "Perspectives of Pig-iron Production in Electric Furnaces" (Otklik na stat'yu A.G. Gerasimova "Perspektivy proizvodstva chuguna v elektropechakh")

PERIODICAL: *Stal'*, 1959, Nr 5, pp 393 - 399 (USSR)

ABSTRACT: The original author considered that the electrical conductivity of iron-ore melts approaches that of metals which makes the design of a high-capacity furnace difficult as, on accumulation of molten ore, the evolution of power in the furnace sharply decreases. The present authors do not agree with this view, pointing out that it was based on the operating experience of a furnace of a special design. The electrical conductivity of molten slags in normally operating electric furnaces for pig iron does not interfere with supplying the bath with large quantities of electric power. The authors consider that the production of pig iron in large electric furnaces will be economical in some regions rich in electric power supplies and lacking in coking coals (like Eastern Siberia, the Far East). In order to obtain correct economic

Card 1/2

Remarks on the Paper by A.G. Gerasimov "Perspectives of Pig-iron  
Production in Electric Furnaces" SOV/133-59-5-5/31

indices of the production of pig iron in electric furnaces, designing and construction of a furnace of 60-100 MVA on one of the newly-planned iron and steel plants in the eastern region of the USSR is considered necessary. In the meantime, an experimental plant at the "Sibelektrostal" Works should be built at which the smelting technology can be studied, using preliminary reduced iron ore pellets. There are 5 Soviet references.

Card 2/2

AUTHOR: Morgulev, S.A., Engineer SOV/133-59-1-11/23

TITLE: Improvement in the Utilisation of the Power of Transformers of Large Electric Steelmaking Furnaces (Uluchsheniye ispol'zovaniya moshchnosti transformatorov bol'sikh elektrostaleplavil'nykh pechey)

PERIODICAL: 'Stal', 1959, Nr 1, pp 49 - 53 (USSR)

ABSTRACT: The German Eichelstahlwerke in their 15 000 kVA furnace used a voltage of 340 V; for a similar installation, the British firm, Fox of Stokesbridge, uses a voltage of 325 V; a USA firm uses for a furnace of a similar capacity a transformer of 25 000 kVA rating with a voltage of 450 V. To elucidate the indices of the furnace intended for operation at high voltages during the smelting period and also the problem of utilising the full power of furnace transformers, a special test rig was designed for a 40-ton furnace of the Elektropech Trust. By utilising two equal furnace transformers according to a specially designed circuit it was possible to increase continuously the voltage from 282 to 460 V during the smelting period and simultaneously to increase the power of the transformer from 9 500 to 15 000 kVA for a current intensity in the electrodes of about 20 kA. Comparative campaigns

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SOV/133-59-1-11/23

Improvement in the Utilisation of the Power of Transformers of Large Electric Steelmaking Furnaces

were carried out at the voltages of 282, 364 and 420 V; for a short period, the furnace was operated at 460 V. The calculated and the measured indices of the operation of the furnace during the smelting period for the voltages 282, 364 and 420 V are entered in a table on p 50 and are compared with some of the data of the German and British furnaces. On the basis of the obtained results, it is concluded that: 1) increase in the voltages of medium and large-size electric steelmaking furnaces brings about an improvement in the indices of operation of such furnaces and permits reducing the power consumption; 2) for improving the utilisation of the power of large furnace transformers of higher voltages, it is necessary to reduce during the first half of the melting cycle the ratio of the short-circuit currents to the rated currents to a value of 2.5-2.2; 3) after stabilising the electrical regime of electric smelting furnaces during the initial and the middle period of smelting, it is advisable to introduce into the charge a small quantity (about 1%) of slag-forming substances (lime and ore); 4) the electric regimes in the largest electric steelmaking furnaces must

Card2/3

SOV/133-59-1-11/23

Improvement in the Utilisation of the Power of Transformers of Large Electric Steelmaking Furnaces

be such that it is possible to operate such furnaces without using additional expensive compensating equipment. Thereby, it is advisable to utilise higher voltages. There are 3 figures, 1 table and 4 references, 1 of which is German, 1 French, 1 English and 1 Soviet.

ASSOCIATION: TsNIIChM

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PAPERS OF THE AMERICAN ACADEMY IN LONDON 11

placed in the field of foreign affairs.  
complaint. The resolution is a summary of the proceedings of the Foreign Ministers' Conference of the Soviet Powers at the Conference of the Soviet Ministers of Foreign Affairs held on the 20th of June, 1924, in Moscow, and the Council of People's Commissars of the Soviet Socialist Federative Republics of Russia (Sovnarkom) has decided to submit it to the Foreign Ministers' Conference of the Soviet Powers for their consideration. A copy of the resolution is also being sent to the governments of the other countries which have been invited to the Conference of the Soviet Powers.

Proprietary, S.A., On Relation of Brazil: Slave Power Capitality	269
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APPROVED FOR RELEASE: 03/13/2001

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MORGULEV, S. F.

PHASE I BOOK EXPLOITATION

SOV/4756

Leykin, Veniamin Yefimovich, and Pavel Aleksandrovich Sakharuk

Elektrometallurgiya stali i ferrosplavov (Electrometallurgy of Steel and Ferroalloys) 2d ed., rev. Moscow, Metallurgizdat, 1960. 600 p. Errata slip inserted. 6,200 copies printed.

Ed.: Ya. M. Bokshitskiy; Ed. of Publishing House: Ya. D. Rozentsveyg; Tech. Ed.: V. V. Mikhaylova.

PURPOSE: This is a textbook for metallurgical tekhnikums, and may also be useful to middle-level technical personnel of steel and ferroalloy manufacturing plants.

COVERAGE: The authors review fundamentals of the theory of metallurgical processes and explain basic principles underlying the manufacture of steel and ferroalloys in electric furnaces. They describe various types of electric furnaces, such as arc, induction, and resistance furnaces, and outline their construction, equipment, and accessories. Modern techniques in the use of vacuum, oxygen blowing, continuous ingot casting of steel, etc., in the field of

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Electrometallurgy of Steel (Cont.)

SOV/4756

steel and ferroalloy metallurgy are discussed. The introduction and Parts II, III, IV, and V were written by V. Ye. Leykin, Parts I and VII by P. A. Sakharuk, and Parts VI and Ch. XV of Part VII by S. A. Morgulev. No personalities are mentioned. There are 12 references, all Soviet.

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593

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~~CACG 14/15~~

DEKHANOV, N.M., inzh.; KPAVCHENKO, V.A., inzh.; VOLKOV, V.F., inzh.;  
SEREBRENNIKOV, A.A., inzh.; MORGULEV, S.A., inzh.; RULESHOV, P.Ya.,  
kand.tekhn.nauk; YELENSKIY, F.Z., inzh.

Making 75-percent ferrosilicon with gas coke. Stal' 21 no.12:1088-  
1089 D '61. (MIRA 14:12)

(Ferrosilicon--Electrometallurgy)  
(Gas industry--By-products)

MORGULEV, Ya., inzh.-ekonomist

Effectiveness of elevators for storing surplus grain and relocation  
of flour mills. Muk.-elev.prom. 25 no.3:27-28 Mr '59.  
(MIREA 12:6)

1. Promsernoprojekt.  
(Grain elevators) (Flour mills)

9.3260

82961

S/142/60/003/002/001/022

E192/E382

AUTHORS: Glebovich, G.V. and Morgulin, L.A.

TITLE: Millimicrosecond Pulse Technique (Review)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika,  
1960, Vol 3, No. 2, pp 137 - 152

TEXT: The survey deals with the methods of generation, amplification  
and display of the rectangular pulses of millimicrosecond duration.  
First, the generation by means of feedback circuits is considered.  
It is pointed out that successful generators can be built with  
secondary-emission tubes, the circuits being in the form shown in  
Fig. 1. By means of these circuits it is possible to obtain the

rate of rise of the order of  $10^9$  V/sec. On the other hand by means  
of a multivibrator (as shown in Fig. 2), furnished with a secondary-  
emission tube, it is possible to obtain pulses having a duration of  
2 - 5  $\mu$ sec with repetition rates of 1 Mc/s. The millimicrosecond  
pulses can also be generated by means of blocking oscillators,  
provided their transformers are properly designed. Another method  
of pulse generation is based on the circuits provided with a delayed  
feedback; two circuits of this type are shown in Fig. 3. By means

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Millimicrosecond Pulse Technique (Review)

of such devices it is possible to generate pulses having a duration of 7  $\mu$ sec and repetition frequencies up to 20 Mc/s. A different type of pulse generator is based on pulse-forming lines. Such devices are illustrated in Fig. 4. The switches employed in these generators can be either special relays or fast thyratrons. These circuits permit the generation of pulses having a duration of a few millimicroseconds and comparatively high amplitudes. One of the disadvantages of these line-type generators is that they have to be provided with a matched load. This difficulty was overcome in the circuits illustrated in Fig. 5. By means of these devices it is possible to obtain the same performance as with the previous line-type generators. The pulses can also be produced by means of the circuits with non-linear inductances and capacitances, such as shown in Fig. 6. These devices can deliver very high amplitudes (up to 10 kV) and pulse durations down to 5  $\mu$ sec. In order to obtain pulses shorter than 1  $\mu$ sec at repetition frequencies of the order of hundreds of Mc/s, special electronic devices are employed. The main device for the amplification of millimicrosecond pulses is the distributed amplifier

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X

## Millimicrosecond Pulse Technique (Review)

(see Fig. 8). Some amplifiers have been constructed which have an amplification of 20 db and a rise time of 0.7  $\mu$ sec. One of important devices in millimicrosecond pulse technique is the pulse transformer. One of the very successful transformers is based on several segments of coaxial cable. The pulses can be observed by means of special high-frequency oscillographs. By means of some modern oscillographs it is possible to obtain time bases whose sweep corresponds to 3-5  $\mu$ sec.

There are 8 figures and 41 references: 24 English, 3 German, 1 Czech and 13 Soviet.

ASSOCIATION: Gor'kovskiy politekhnicheskiy institut im.  
A.A. Zhdanova (Gor'kiy Polytechnical Institut  
im. A.A. Zhdanov)

SUBMITTED: June 23, 1959

Card 3/3

MORGULIN, Yu.B., kand. tekhn. nauk; POVERKIN, G.M., kand. tekhn. nauk;  
KAMINSKIY, V.N., inzh.

Air cooling of the compressor as a means of increasing the effectiveness  
of turbocharging of diesel engines. Trakt. i sel'khoz mash. no.6:3-6. Je  
'65. (MIRA 18:7)

1. Gorudarstvennyy sovetskiy nauchno-issledovatel'skiy traktornyj in-  
stitut.

MORGULIS, A. (Batumi)

Green Cape, IUn. nat., no. 3:32-34 Kr '60. (KIRA 13:5)  
(Batumi--Botanical gardens)

SMIRNOV, A.; MORGULIS, D., inzh.

Don't forget the needs of commercial photographers. Nest.prom.i  
khud.promys. 2 no.7:35 Jl '61. (MIRA 1):1)

1. Direktor Moskovskoy fabriki fotorabot (for Smirnov). 2. Moskovekaya  
fabrika fotorabot (for Morgulis).  
(Photography, Commercial--Equipment and supplies)

MORGULIS, G., kand.tekhn.nauk

Improving diesel engines. MTD 2 no. 6:38 Je '60. (MIRA L412)

1. Chlen soveta Nauchno-tehnicheskogo obshchestva Kolomenskogo  
teplovozostroitel'nogo zavoda.  
(Diesel engines—Technological innovations)

ZAROSHEVSKIY, S. A.; MORGUNOV, I. A.; POPOV, N. N., kand. tekhn. nauk

Interdependence of the chemical composition and temperature  
of cast iron and slag during the tapping of a blast furnace.  
Met. i gornorud. prom. no.3:4-7 Ky-Jo '65. (MIFI A 18:11)

L 8958-66 ZAT(n)/BMP(j)/T RM  
ACC NR: AP9026529

SOURCE CODE: UW/0286/65/300/019/0070/0070

AUTHORS: Ielisheva, T. I., Il'ichev, G. I., Karpov, Ye. P., Meselkin, A. S.,  
Kharkov, M. N., Petrush, S. A., Ionova, N. I., Dorina, P. A., Khamoshko, Ye. F.,  
Erebyan, K. N., Loeava, V. A., Morozina, L. A., Arkhangel'skaya, I. P.,  
Kryuchkova, N. P.

ORG: none

TITLE: Method for obtaining film-forming materials and impregnating materials for  
trimming and filling of natural and artificial leather / Class 39, No. 175227/

SOURCE: Byulleten' izobretenij i tovarnykh znakov, no. 19, 1965, 'O

TOPIC TAGS: leather, polymer, protein, vinyl plastic, acrylic plastic

ABSTRACT: This Author Certificate presents a method for obtaining film-forming and  
impregnating materials for trimming and filling of natural and artificial leather by  
modification of vinyl, for instance, acrylic and methacrylic monomers by means of  
proteins. To increase the thermal, acetone, and water stability of coatings and the  
durability and filling of the material structure, the starting monomers are  
emulsified in an aqueous protein solution. The emulsification is followed by

UDC: 678.744.32-416  
677.062.324.1

Card 1/2

L 6958-66

ACC NR: AP9026329

polymerisation in the presence of oxidation-reduction initiating systems.

SUB CODE: 07/ SUBM DATE: 09P+62

BVK  
and 1/2

REVIEW, S.I.; MAGLIA, L.; HAN F., R.V.; LARIVIERE, R.

" Film forming substances for the finishing of buffalo grain  
leather. Kosha-Luv. prov. U no.7120-25 01 '65. 311a 101"

MORGULIS, LeA., insht.

Construction of pipelines in the wintertime. Stroi. truborov. 3  
no.10:11-13 O '58.  
(MIRA 11:11)  
(Pipelines--Cold weather conditions)

MORGULIS, L.A., insh.

Organization of earthwork during the winter construction of  
pipelines in the East. Stroi. truboprov. 5 no.9:14-16 S '60.  
(MIRA 13:9)  
(Siberia--Pipelines--Cold weather conditions)

MORGULIS, L.A., inzh. (g.Cheljabinsk)

Improving designs of dippers for working rocky ground. Stroi.  
truboprov. 6 no. 1:15-16 Ja '61.  
(MIRA 14:2)  
(Excavating machinery)

MORGULIS, L.A., inzh.; BOGUSLAUSKIY, P.G., inzh.

Further improvement of the operations-flow method of working  
trenches by layers in the Virgin Territory. Stroi. truboprov. 7 no.11;  
17-19 N '62. (MIRA 15:12)

I. Stroitel'noye upravleniye No.2 tresta Soyusprovodmekhanizatsiya,  
Chelyabinsk.  
(Earthwork) (Aqueducts)

MORGULIS, Leyb Aronovich, laureat Gosudarstvennoy premii SSSR;  
FINKINSHEYN, B.A., inzh., red.

[Layer operation-flow digging of trenches; practices of  
the "All-Union Trust for the Mechanization of Construction  
Work" of the State Industrial Committee on the Gas Industry  
of the U.S.S.R.] Posloinaia operatsionno-potochnaia razra-  
botka transhei; opyt tresta "Soyuzprovodmekhanizatsiya" Go-  
sudarstvennogo proizvodstvennogo komiteta po gazovoi pro-  
myshlennosti SSSR. Moskva, Gosstroizdat, 1963. 23 p.  
(MIRA 17:9)

1. Moscow. Nauchno-issledovatel'skiy institut organizatsii.  
mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stva.
2. Glavnyy inzhener Spetsializirovannogo upravleniya No.2  
tresta "Soyuzprovodmekhanizatsiya" (for Morgulis).

MORGULIS L. S.

Morgulis L. S., Sitnov M. A. and Shlyanov A. I., "Adjustment of Regulation of the AK-25-2 Steam Turbine at the Leningrad Metals Plant," Naladochnyye i eksperimental'nyye raboty OGRES [Corrective and Experimental Work of the OGRES], 1953, No 6, Pages 47-55.

8(2,5)

SOV/112-58-3-3700

Translation from: Referativnyy zhurnal. Elektrotehnika, 1958, Nr 3, p 24 (USSR)

AUTHOR: Bunkin, V. I., Morgulis, L. S., and Shlyanov, A. I.

TITLE: Testing and Adjusting the Regulation System of Type AK-50 KhTGZ  
Turbines (Izpytaniye i naladka regulirovaniya turbin tipa AK-50 KhTGZ)

PERIODICAL: Naladochn. i eksperim. raboty ORGRES, 1956, Nr 13, pp 21-27

ABSTRACT: Violent jarring of levers, valve slide, and servomotor stem that resulted in stem breakage were formerly observed in the functioning of the governing system of turbines. On a sudden loss of 80%-rated load, the turbine ran away until the automatic overspeed device tripped. In the course of governor adjustments, the servomotor-piston stroke was reduced by 30% and both the dead band and the proportional band were brought to normal. As a result of the above adjustments, the governor system was capable of coping with the dropping of full rated load and showed a stable functioning within the whole range of loads.

L.S.M.

Card 1/1

Physical Properties of a Barium Metal  
Wire File Thermonuclear Catalyst. V. M. G.  
Mazurina. Soviet Physics - Tekhnika  
Promst., pp. 317-323, 11 (1967). Study  
of the processes associated with a cathode  
operating as an oxidizing system (impass) of  
a suspended base which is covered with a  
surface consisting of a monatomic barium  
film that is in a state of dynamic equilib-  
rium.

MORGULIS, M.L.

USSR/Processes and Equipment for Chemical Industries -  
Processes and Apparatus for Chemical Technology.

K-1

Abs Jour : Ref Zhur - Khimiya, No 2, 1957, 6931  
Author : Morgulis, M.L.  
Inst :  
Title : Vibratory Commutation of Materials.  
Orig Pub : Khim. nauka i prom-st', 1956, 1, No 2, 186-199

Abstract : Operation principle of a vibratory mill is considered and a diagram showing the principle of its operation is given. Equations are derived which define the conditions of tossing of a ball in the mill, and the critical values of Froude's criteria, corresponding to the number of complete revolutions performed by the shaft of the mill during the length of time when the ball flies along a parabolic trajectory. The principal factors are considered, which determine the intensity of vibratory commutation. The advantages are shown of the continuous process of

Card 1/2

MORGULIS, M.L., kandidat tekhnicheskikh nauk.

Working principle and performance of vibration grinding mills.  
Tsvet. set. 29 no. I:22-30 Ja '56. (MIRI 9:6)

I.VINITSM.  
(Ore dressing) (Metallurgy--Apparatus and supplies) (Crushing  
machinery).

MORGULIS, Mark L'vovich, kandidat tekhnicheskikh nauk; REBINDER, P.A.,  
GLADKIKH, redaktor; KRUGLOV, S.A., redaktor; GLADKIKH, N.N..  
tekhnicheskiy redaktor

[Vibration milling of materials.] Vibratsionnoe ismel'chenie  
materialov. Pod red. P.A. Rebindera. Moskva, Gos.izd-vo lit-ry  
po stroit.materikam, 1957. 104 p.  
(Milling machinery)

PAVLOVA, Z.S., moshchishiy nauchnyy sotrudnik; RUBINA, S.I., kand.tekhn.nauk;  
MORAVLIS, M.L., kand.tekhn.nauk

Effect of the degree of pigment dispersion on the coloration  
of polyvinyl chloride and rubber. Leg.prom. 18 no.11:25-76  
N '58. (MIRA 11:12)

(Painting, Industrial)

MORULIS, M.L.; SEMATEKII, N.N.

Utilizing waste products in the manufacture of goods made of  
amineplastics and phenoplasts. Plast. massy no. 7146-49 '60. (MIMA 13:10)  
(Amineplastics) (Phenol condensation products) (Plastics industry)

SOKOLOV, Vasiliy Ivanovich, doktor tekhn.nauk, prof.; ZHIGALOV, S.F.,  
doktor tekhn. nauk, prof., ratsenzent; KORGULIS, M.L., kand.  
tekhn. nauk, red.; KARGANOV, V.G., inzh., red.; KODEL', B.I.,  
tekhn. red.

{Modern industrial centrifuges} Sovremenye proizvodstvennye tsentri-  
fugi. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry,  
1961. 451 p. (MIRA 14:9)

(Centrifuges)

MORGULIS, M.L., kand. tekhn.nauk, nauchnyy sotr.; POLOTSKIY, L.M.,  
kand. tekhn.nauk, nauchnyy sotr.; DOBOSHITS, M.L., inzh.,  
red.

[Devices for determining the resistance of hard materials to  
grinding; from materials of the All-Union Research Institute  
of New Building Materials of the Academy of Construction and  
Architecture of the U.S.S.R.] Pribory dlia opredelenia sopro-  
tivlialaemosti tverdykh materialov izmel'cheniiu; po materialam  
VNIINSM ASIA SSSR. Moskva, Gosstroizdat, 1962. 19 p.  
(MERA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh  
stroitel'nykh materialov Akademii stroitel'stva i arkhitek-  
tury SSSR (for Morgulis, Polotskiy).  
(Building materials--Testing)

MORGULIS, M.L., kand. tekhn. nauk; FEIROV, K.G., inzh.

New vibration mixers of the All-Union Scientific and Research Institute for New Structural Materials. Khim. i neft. mashinostr. no.4:3-5 O '64. (PERA 17:12)

NAYDICH, I.M., kand. tekhn. nauk; MIRONOV, M.L., kand. tekhn. nauk;  
GAVRILOV, B.A., inzh.

Present-day highly efficient crushing equipment. Strel. mat.  
10 no.2:35-38 F '64. (MIRA 27:6)

BUSINIEV, L.P., kand.tekhn.nauk; MORGULIS, M.L., kand.tekhn.nauk;  
TRUSOV, B.K., inzh.

Prospects for using certain classes of impact mills.  
Stroi. i dor.mash. 10 no.12:28-29 D '65.

(MIRA 19:1)

MORGULIS, M.L., kand.tekhn.nauk

Modern equipment for fine milling and accurate classification.  
Zhur.VKHO 10 no.1:67-72 '65. (MIRI 18:3)

L 20391-66 EWT(m)/EWT(j)/T/ETC(m)-6 BY/RM

ACC NR: AF6005942

(A)

SOURCE CODE: UR/0191/66/000/002/0003/0005

AUTHORS: Sinegub-Lavrenko, A. A.; Morgulis, M. L.

ORG: none

TITLE: Obtaining highly filled polyethylene

SOURCE: Plasticheskiye massy, no. 2, 1966, 3-5

TOPIC TAGS: chemical dispersion, polyethylene plastic, silica gel / P4006-T polyethylene plastic

ABSTRACT: A composition consisting of polyethylene P4006-T and powdered silica gel (containing 90-94% SiO<sub>2</sub>) in ratio 1:1 and 1:2 was prepared by co-dispersing these components in a zone of intensive pulverization and with subsequent molding at 160-170°C and 50 kg x sec/cm<sup>2</sup>. A planetary mill, which can produce a completely uniform deep blue product (containing up to 66% of the filler), is illustrated in Fig. 1. The processing time is about 30 min. Extruded platelets of polyethylene filled with silica gel are characterized by improved hardness, adhesion, luster, thermal stability, and other mechanical properties. The process of co-dispersion may be employed to introduce a variety of powdered

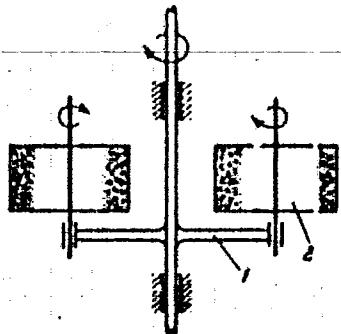
Card 1/2

UDC: 678.742.2:66.022.32

L 20391-66

ACC NR: AF6005942

Fig. 1. Diagram of the planetary mill:  
1 - feed port; 2 - housing with  
grinding media.



additives, e.g., thermo- and light stabilizers. Orig. art. has: 3 figures.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008

Card 2/2 *UV*

MORGULIS, M.S. (Rostov, Yaroslavskoy oblasti).

Construction of a sensitive galvanometer. Fiz. v shkole 15 no.  
6:47-50 N-D '56. (MLRA 9:12)

(Galvanometer)

105-9-16/32

AUTHOR: Morgulis, M.S. (Rostov, Yaroslavskaya obl.)

TITLE: On a Certain Thermo-Electric Phenomenon (Ob odnom termoelektri-cheskem yavlenii)

PERIODICAL: Elektrichestvo, 1957, Nr 9, pp. 59-60 (USSR)

ABSTRACT: The author succeeded in finding a new thermoelectric phenomenon, viz. the production of a thermoelectromotoric force in chemically homogeneous conductors in the case of a shifting of the temperature gradient in it. Let a metallic conductor, for instance a piece of iron wire, be connected with a galvanometer of a sensitivity of  $10^{-6}$  A. If this wire is heated at any point of a candle flame, the thermoelectric current generated in the circuit proves to be so weak that the galvanometer indicator is not deflected. If, however, the candle is shifted along the wire and by this also the temperature gradient is shifted, a current occurs which is indicated by the galvanometer. At an increase of the velocity of the shifting, current intensity increases. With a change of direction of the candle motion the current direction is reversed. This phenomenon was observed most distinctly on an iron wire. The author is of the opinion that here a phenomenon is concerned which is inverse to the V. Thomson effect.

SUBMITTED: April 15, 1956

AVAILABLE: Library of Congress

Card 1/1

10324  
S/194/62/000/006/100/232  
D288/D308

94310

AUTHOR: Morgulis, M.Yu.

TITLE: Effect of collector-base overlap on the parameters  
of alloyed germanium triodes

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,  
no. 6, 1962, abstract 6-4-36 e (V sb. Poluprovodnik.  
priboroy i ikh primeneniye, no. 7, M., Sov. radio,  
1961, 103-114)

TEKST: Dependences of the voltage drop between emitter and collector ( $U_{ec}$ ) in a transistor operating in the saturated region are studied.  $U_{ec}$  depends on the ratio of the collector diameter to the inner diameter of the ring forming the base contact. It is shown experimentally that when this ratio is lower than  $\sim 0.8$ ,  $U_{ec}$  drop is independent of it. When it reaches 1, a rapid increase of  $U_{ec}$  is observed. This phenomenon is explained by differing effects of the injection of minority carriers into the base from the periphery

Card 1/2

S/194/62/000/006/100/232  
Effect of collector-base overlap ... D288/D308

of the collector compared with the injection from the collector center. If the collector diameter is larger than the inner diameter of base contact ring, the emitter-collector space can be regarded as shunted by the diode formed between the collector and base contact. The author gives the equivalent circuit of a saturated transistor, the above effect (called by the author the overlap effect) being taken into account. Formulas are derived for various voltage drops across different sections of the transistor, taking account of this effect. 3 references. [Abstracter's note: Complete translation.]

Card 2/2

The law of the thermoelectric effect. N. D. Moiseev. J. Russ. Phys.

*Chem. Soc., Phys. Pt. 66*, 175 (1931). The results indicate that for temps. between 100° and 300° she only the Richardson formula  $E = A/T^{1/2}$  may be used with success, all the others being of approx. character. They may be used approx. over a small temp. range.

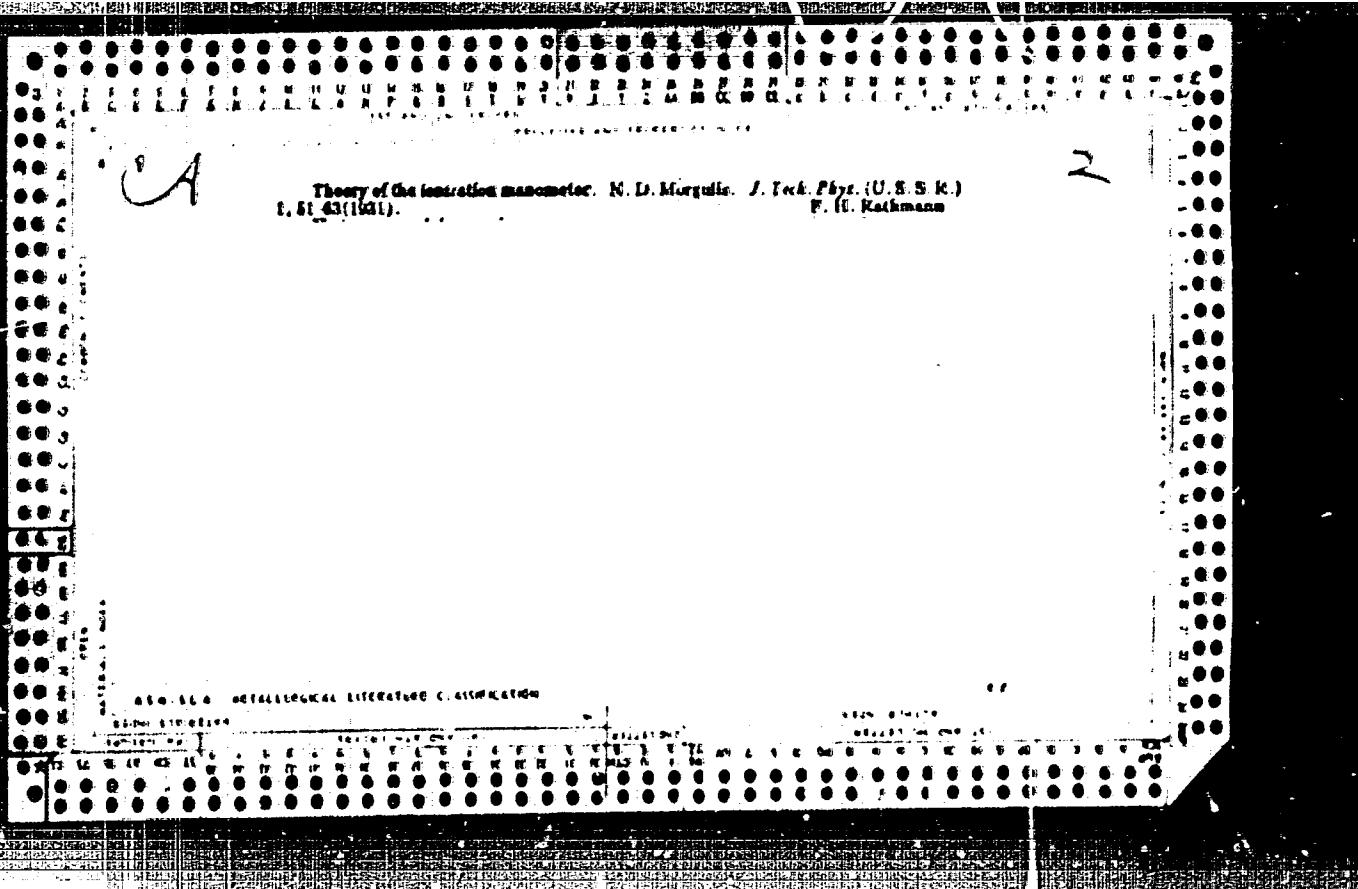
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CO

3

Dependence of the thermoelectronic flow on the voltage. N. S. MUSULIN  
J. Russ. Phys. Chem. Soc., Pure Pt. 60, 401 (1928). Linear relations between the  
thermoelectric current and the voltage were not observed, while the theory based  
on the application of electrostatic forces to the thermoelectric effect received a com-  
plete confirmation.  
V. V. VENAKHAROV

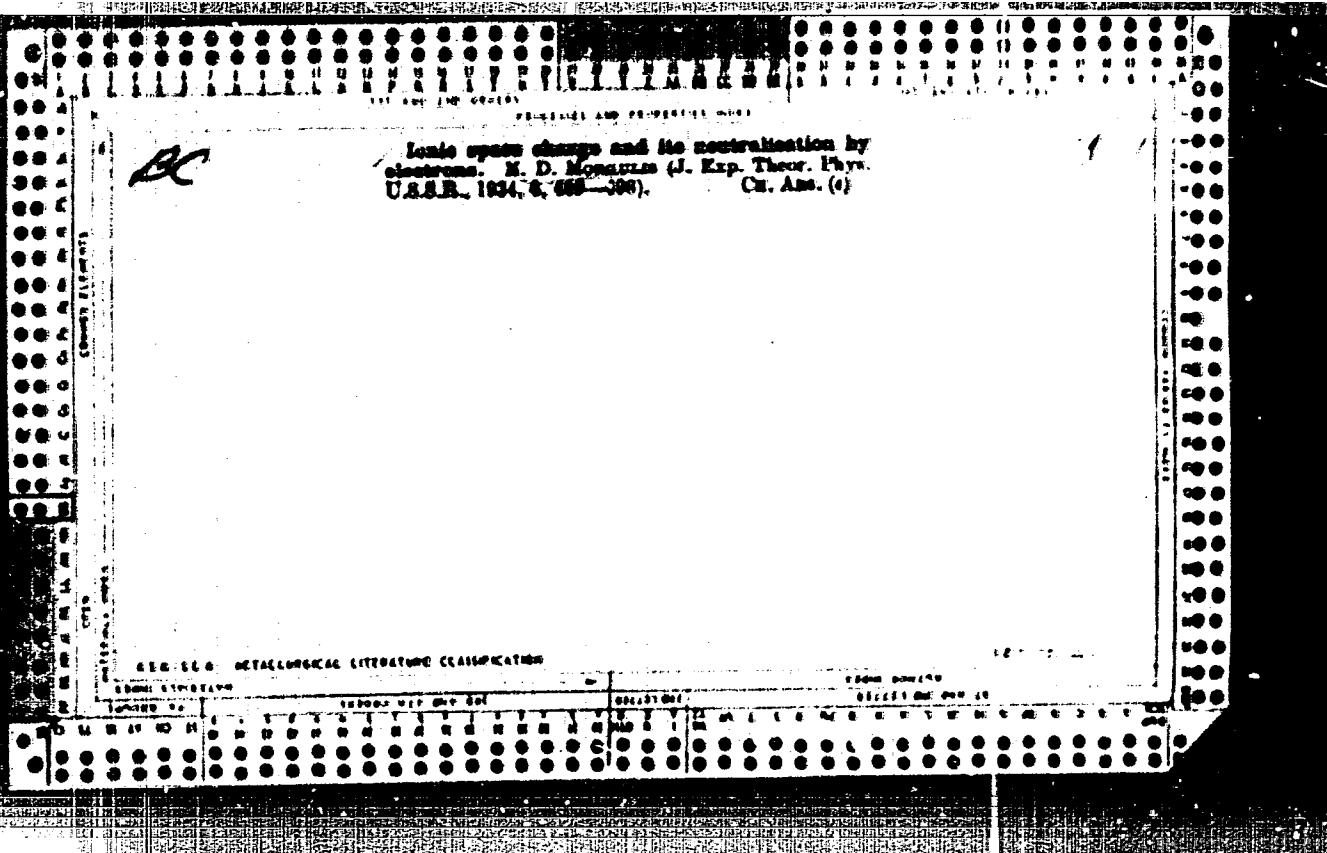
480-524 METALLURGICAL LITERATURE CLASSIFICATION

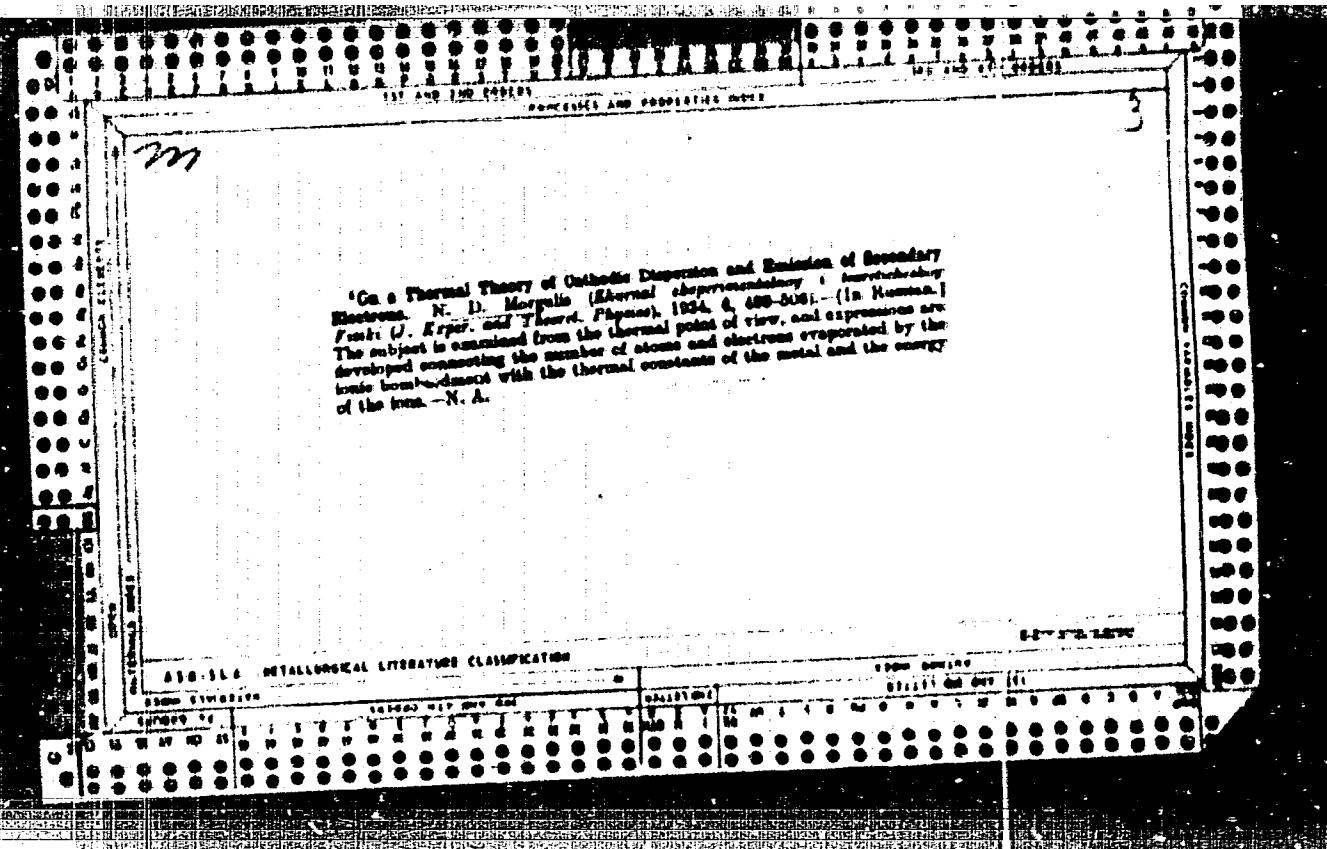


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*[Handwritten mark]*

The influence of weak electric fields on the emission of electrons from thoriated tungsten. N. Moiseev. J. Appl. Phys., Vol. 15, No. 6, 363; (1942). According to Crompton (C. & G. 24, 2048) and Nottingham (Proc. Roy. Soc., A128(1950), C. & G. 26, 346) the work function for W with adsorbed layers of a foreign substance is reduced when a weak elec. field is applied, although there is no min. for the work function in the absence of an elec. field. To investigate this, SC. detail the work function of thoriated W for potentials of 1.10 v. by means of the slope of the Richardson straight line. The decrease of the work function is greater than that calcd. from the Schottky formula. The departure of the expnl. value from the theoretical value is measured by the ratio of the 1st to the 2nd. It increases as the degree to which the W surface is curved, differs from unity. It also increases as the cathode temp. decreases. On dipping lamp bulb in liquid air to remove the remaining traces of air, for anode potentials of 10 v. the electron emission decreases to a certain limiting value, connected with the monatomic layer. No max. in the activation curve as found by Nottingham was observed.

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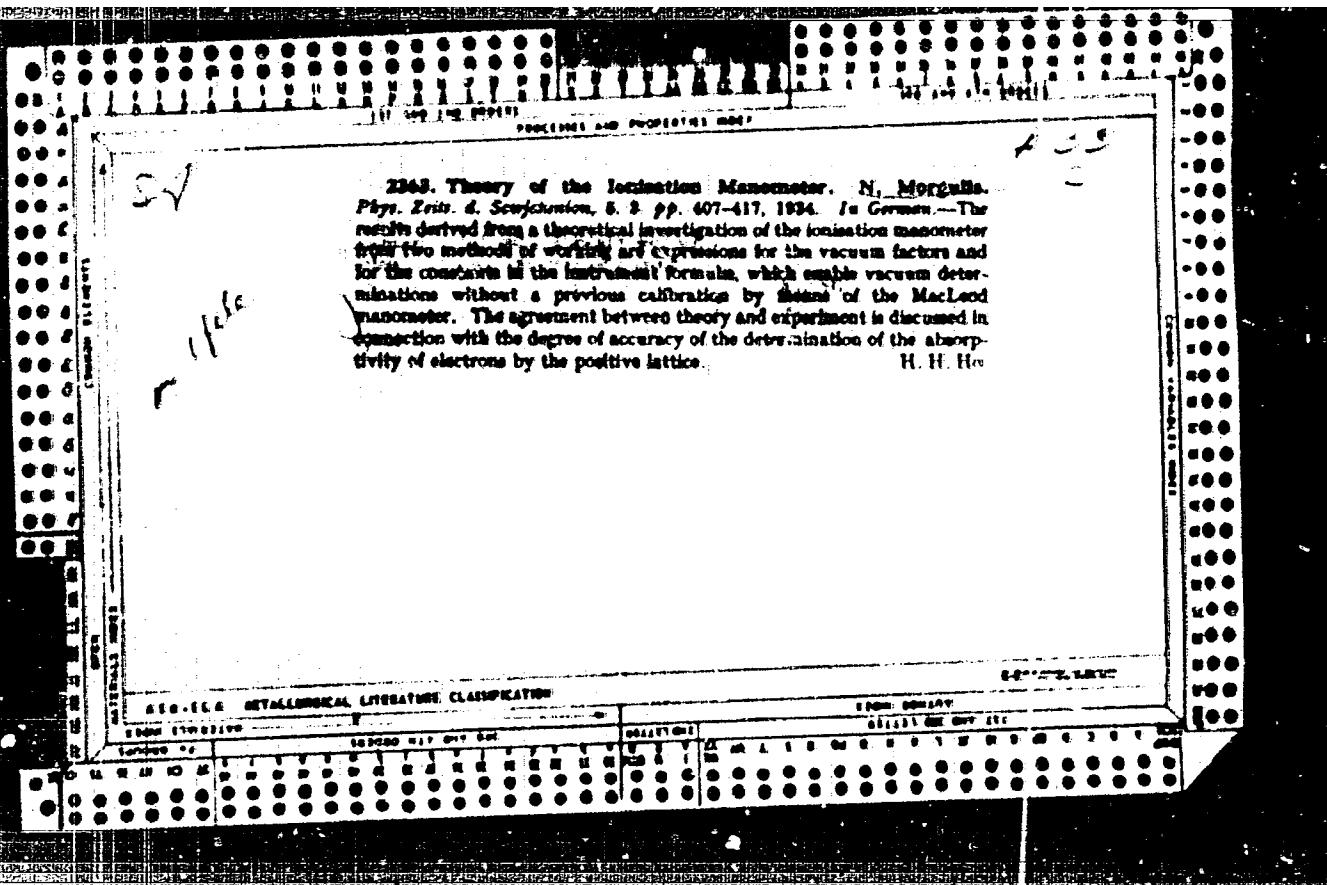
CP

The quantum theory of ionization and neutralization on  
metallic surfaces. N. D. Merzhanov. *J. Phys. Theor.*  
*Zhys. (U. S. S. R.)* 6, 604, 9 (1934). -By the method of  
the quantum theory of electrolytes of Gurney and Foote  
the penetrability  $\kappa$  of the ionization of atoms and the arc-  
radii of various ions on metallic surfaces are calc'd.  
The work function  $\phi$  and the ionizing potential  $V$  calc'd.  
P. H. Kestenbaum

CLASSIFICATION

A 53  
S

2239. Thermal Ionization of Sodium Vapour at a Glowing Tungsten Surface. M. E. Margolis, Phys. Rev. d. Sociedad, U. S., pp. 221-249, 1934.—Results of experiments on the thermal ionization of Na vapour at a W surface are found to agree with theory, especially at pressures of the order  $10^{-4}$  to  $10^{-3}$  mm. of Hg. At lower pressures, deviations occur due to secondary reactions which tend to mask the small primary effect. The influence of the outer field on the Na loss, produced by the thermal ionization of Na, shows that the increase in ionization, observed by an enlargement in the accelerating field of the ions, must be due to a kind of reversed Schottky-effect, that is, to an increase in extraction of the electrons. H. M. B.



Disintegration of a monatomic thorium film on a tungsten cathode in a discharge in mercury vapor. N. Morgulis and M. Bernadine. Physik Z. Sowjetunion 6, 409-411 (1934).—A preliminary note on the calculation of the most critical potential of the ion sufficient to cause disintegration. Curves showing the change of this potential ( $V_0$ ) with temp. are given. The dependence of  $V_0$  on the discharge current in  $\text{Hg}$  vapor is shown by curves.

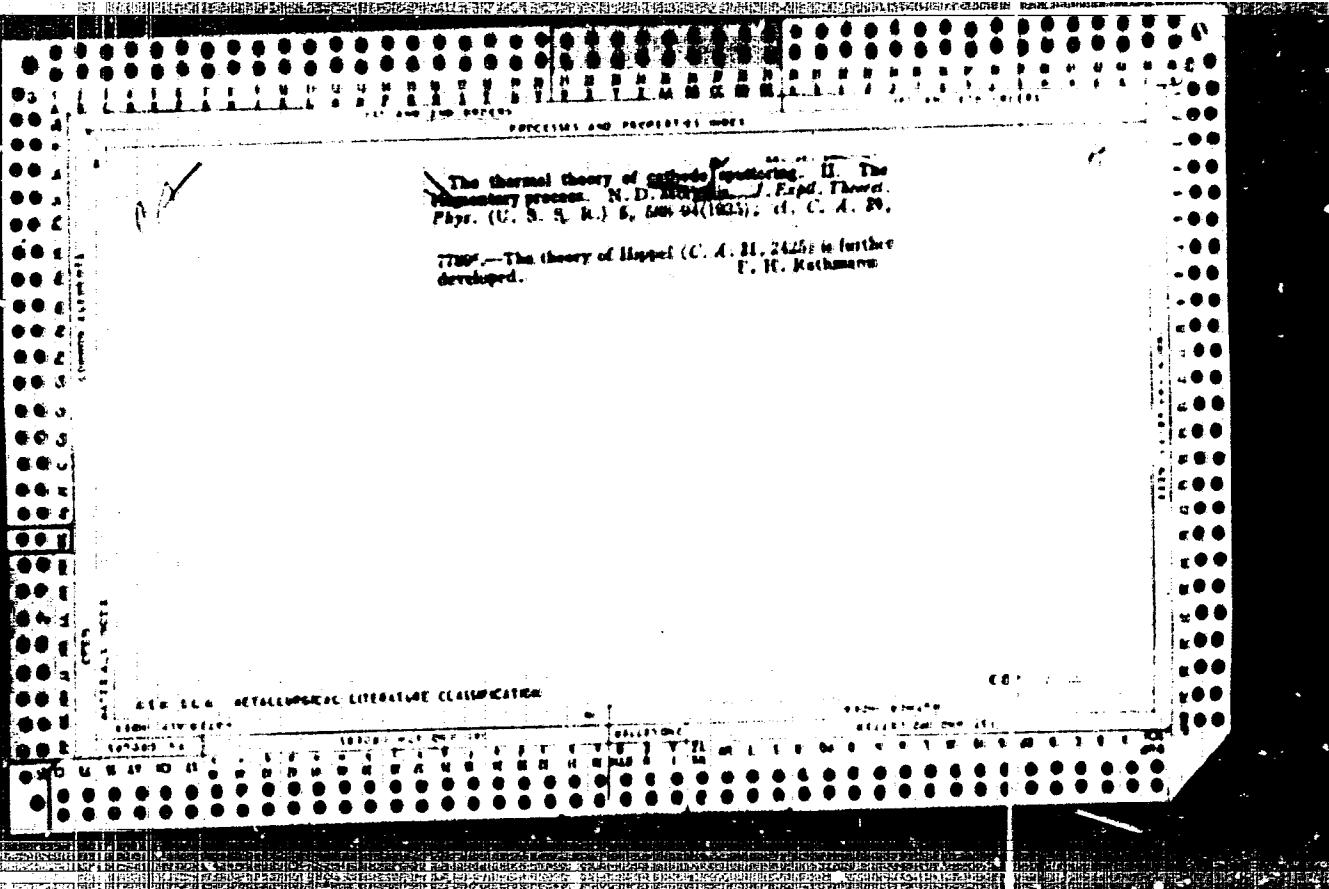
A. W. F. Duncan

BC

DISCUSSION OF THE POSSIBILITY OF DISINTEGRATION OF A METALLIC SHEET ON A SUBSTRATE DURING AN ACOUSTIC CHARGE. Y. MONTAUX AND M. BERNARDIN (Tech. Phys., USSR, 1970, No. 1, p. 62).--The nuclear composite theory of acoustic disintegration does not explain the influence of the total ion-beam energy ( $V_0$ ) required for disintegration. Experiments were carried out on the disintegration of a sheet of Ti film on a W substrate bombarded by  $^{100}\text{Ru}$  ions at various doses. In a tube provided with an auxiliary W cathode, an ordinary arc discharge, through the anode of  $^{100}\text{Ru}$ , gave the temperature of the Ti cathode. The variation of  $V_0$  with dose agrees, overwise with the  $T_0$  method of [1], i.e., bombardment taking place with loss from the auxiliary W cathode, was also determined.  $V_0$  decreases with increasing bombardment dose, starting at a limiting val. of 14-15 eV. The probability of disintegration increases rapidly with increase of ion energy. An expression connecting the crit. disintegration energy with the ionizing energy of the bombarding ion, its ionization potential, the energy of evaporation of the metallic sheet, and the amount of energy lost in impact with the sheet has been derived, and agrees with experimental data. A. J. M.

*Ca*

The elementary process of cathode sputtering under the impact of positive ions. N. Morgulis. *J. Phys. Chem.*, 1958, 62, 1000, p. 1000. The earliest data taken from the thermal theory of cathode sputtering of  $C_60$  at 0.01 eV were checked. It was found that although it corresponds well with the experimental results in order of magnitude there is a discrepancy in the thermal theory in that no account is taken of the existence of the initial energy of the sputtering ions. A theory is developed to include this quantity and tested with available experimental data.



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DOGRINIS, E. D.

Disintegration of metal surfaces by the strokes of positive ions  
Kyiv, Vyd-vo Akademii nauk UkrSSR, 1936. 92 p. (50-46890)

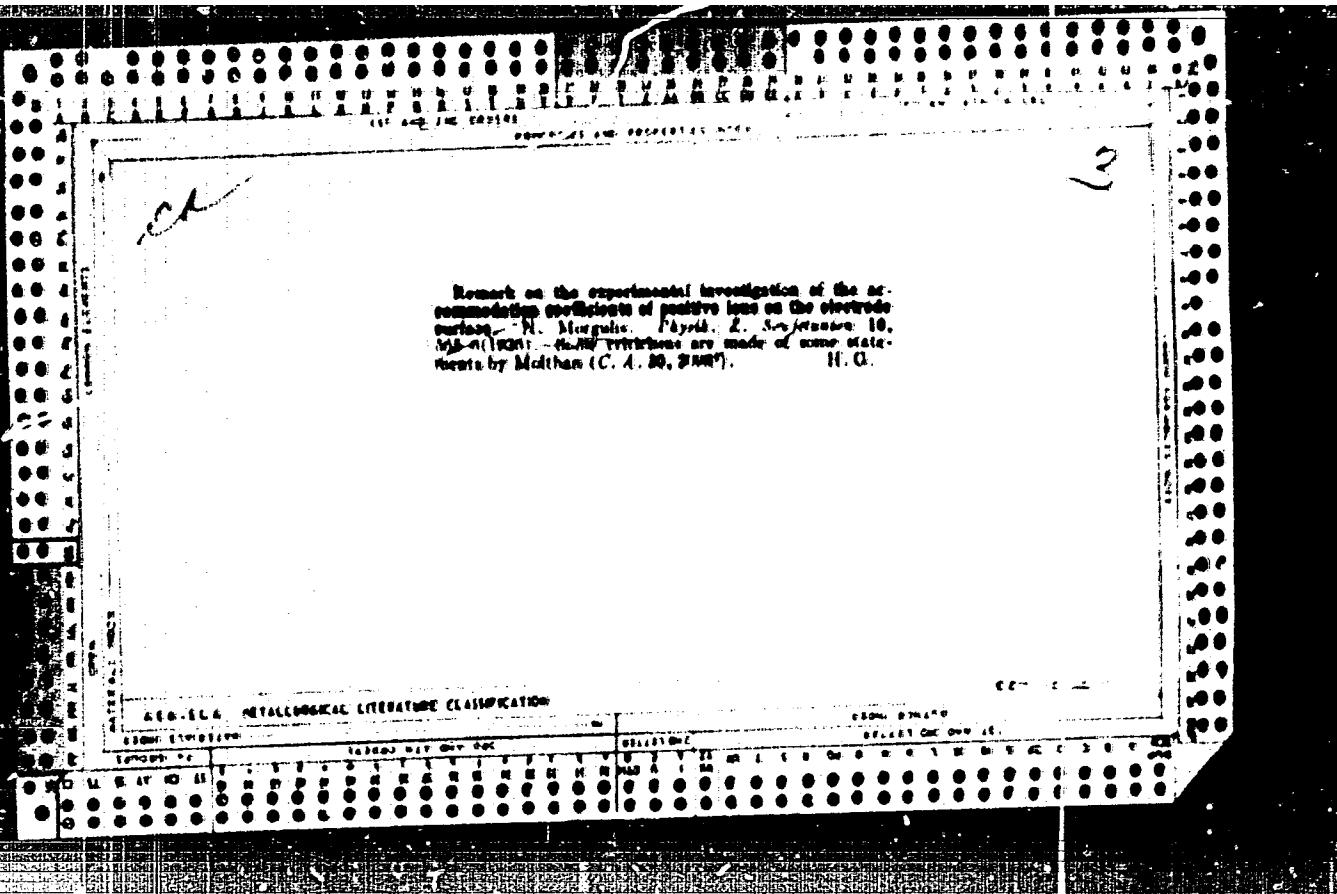
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2-1

Dependence on temperature of cathode sputtering. N. D. Moshnikov, M. P. Belyaeva, and A. M. Parshina (Izvyskai X. Sovetskogo, 1984, 9, 312-316).—Measurements were made with thoriated W in Hg vapour between 1250° and 1750° ab., and with W in Hg vapour between 850° and 2000° ab. Sputtering varied little with temp. of cathode.  
A. E. M.



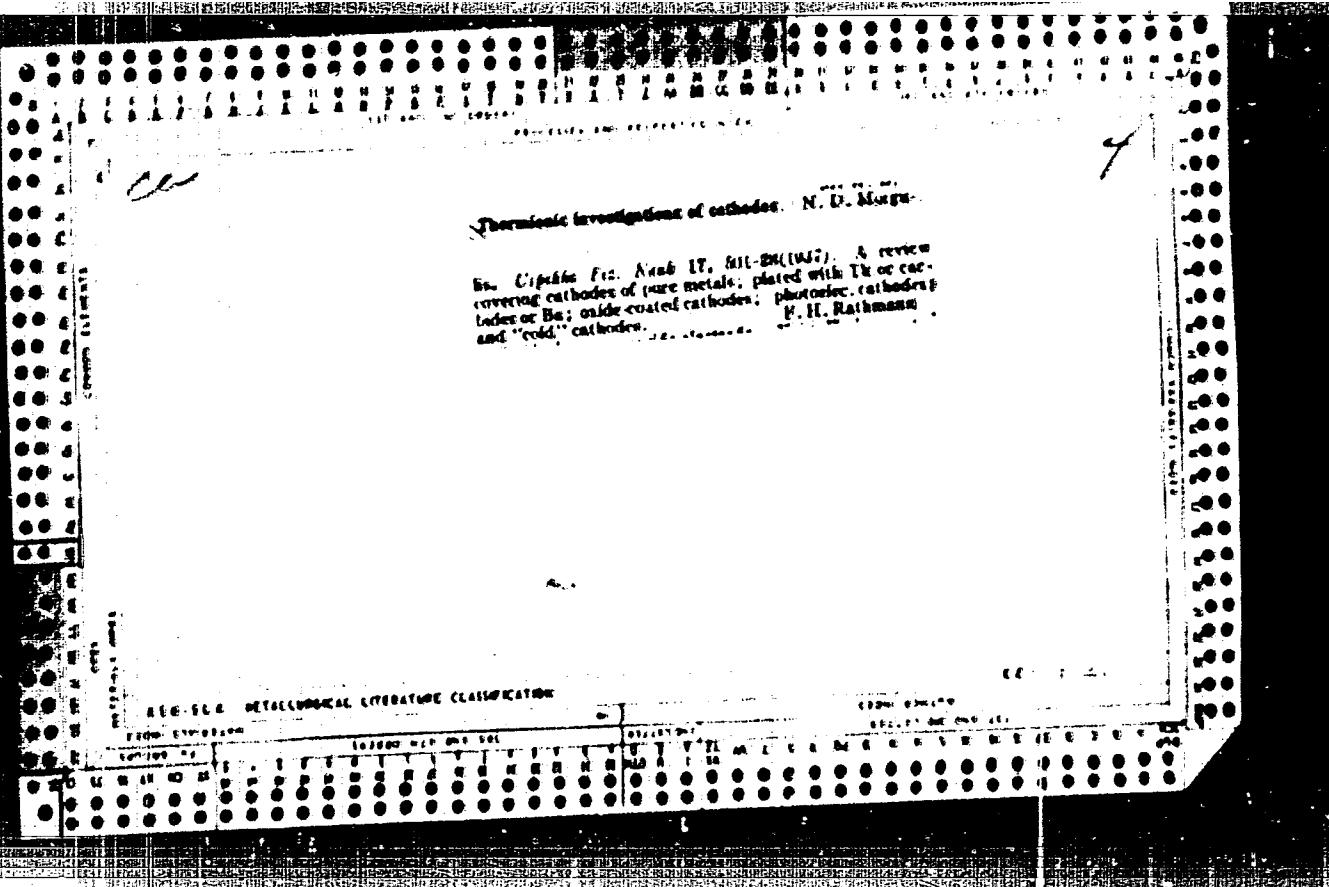
The sputtering of thermoelectron cathodes in the gas-discharge, N. D. Mergulian and A. M. Patriciu, *J. Tech. Phys. (C. S. S. R.)*, 7, 1175 (1957); *Soviet Atomic Energy*, 1958, II, 2517; cf. *C. A.*, 51, 16242<sup>a</sup>; 53, 75161. The principles involved in the establishment of a condition of equilibrium on the oxidized cathode in the gaseous discharge are discussed. By use of special precautions to assure a constant current gradient, desorption curves for the sputtering of W wire having a TiO<sub>2</sub> coating with 11g/cm<sup>2</sup> at abs. temp. of 2000, 2100 and 2200° and pressures of  $10^{-3}$  and  $2.7 \times 10^{-4}$  mm., were determined to test the theoretically developed equations. The agreement was qualitatively satisfactory but not quantitatively so. This lack of quant. agreement is due to the impossibility of maintaining a sufficiently constant current gradient, to the lack of accurate knowledge of the effective temp., and to the complicated course of the process under study.

St. G. Isaac

## CLASSICAL LITERATURE CLASSIFICATION

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Some processes at discharge ignition in the  
gasotron. N. D. Mosovlis and M. D. Gabovitch  
(Bull. Acad. Sci. U.S.S.R., 1958, Ser. Phys., 504-508).  
The effects of feeding tension, pressure, and wall  
effects on the discharge potential of E-12 gasotron at  
high voltages have been examined. The ignition  
peak is found only where a negative charge can  
accumulate on the walls, and the peak diminishes with  
increasing pressure. L. J. J.

MORGULIS, N. D.

Secondary electron emission from oxidized cathodes

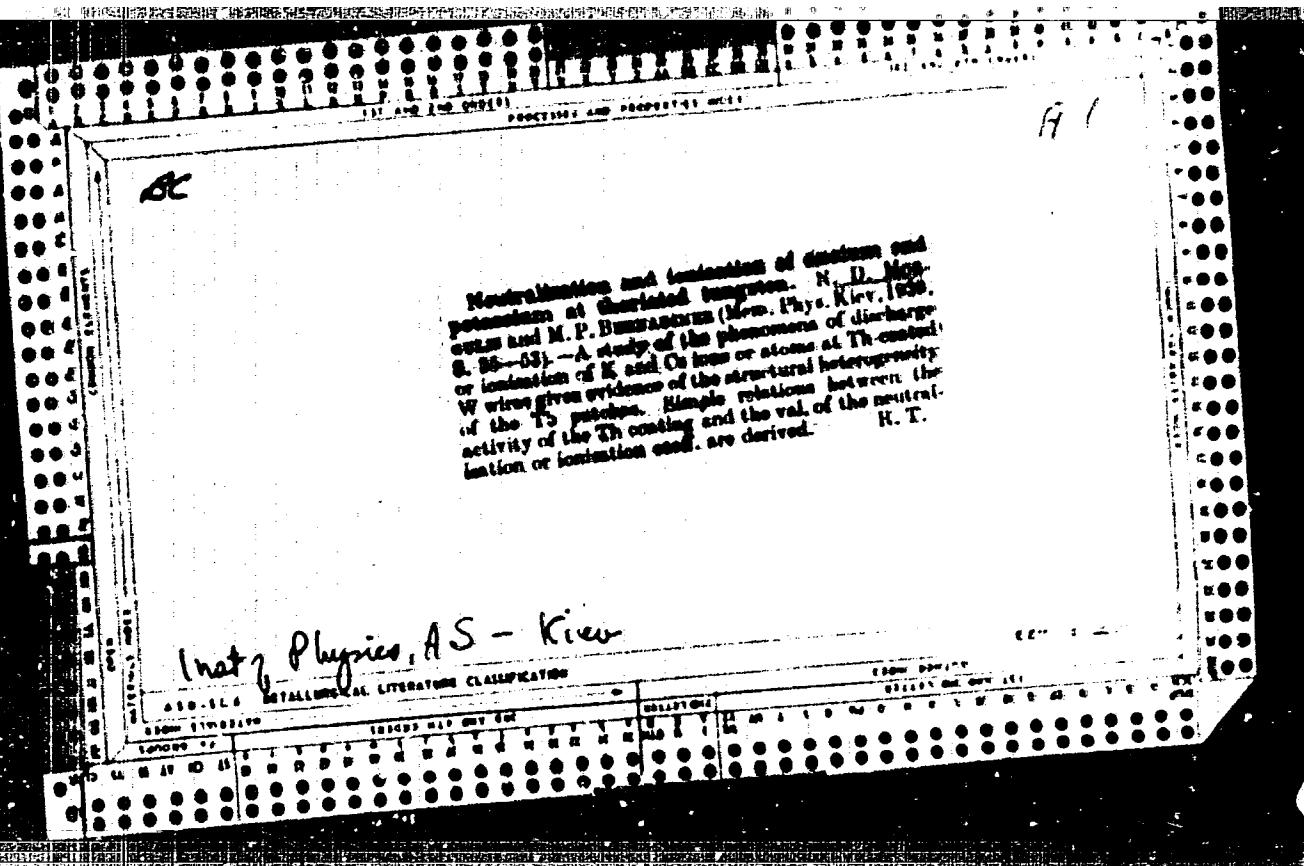
*J. Phys. Chem. Solids*, v. 11, p. 177, 1954  
A time and current analysis of photoemission at 6kv of iron emulsion taken in the field of the 15kv RAO. Ryo-Ichi, Matsutomo, C. A. 29, 36201. The distribution of the energies of the secondary electrons is given for different energies of the primary electrons and varying temperature of the electrodes.

SEARCHED BY METALLURGICAL LITERATURE CLASSIFICATION

Influence of ionization by collisions of the second kind  
on processes in the positive column of a discharge tube  
N. J. Morgan, J. Expt. Phys. et S. S. K. E.  
No. 12 (1931). The Rontgny ambipolar theory is  
generalized to include collisions of the second kind and  
their no. is then calculated. For an A-Ne mixt., the electron  
temp. and A should decrease as the percentage of A in-  
creases, and the no. of collisions of the second kind has a  
maximum at about 6.0% A, while for direct ionization the  
former change monotonically  
F. W. Kethmann

MORGULIS, N.D.

*Localization of sodium atoms on the surface of thoriated tungsten. N. D. Morgulis and B. I. Dratkinovskaya* (in English). Equations are developed showing that (1) on the surface elements corresponding to the max. of the emission curve the work function changes very little during activation, and maintains a value approaching that of pure tungsten (4.52 e.v.); (2) the value of the contact difference of the potentials,  $\Delta V = (e_1 - e_0)$ , and its change with  $\theta$ , differs from the one obtained by Becker (*J. A. 29*, 4667) by analyzing the anomalous Schottky effect, for reasons as yet imperfectly known.  
A. H. Kramps



ca  
Dependence of secondary emission on primary current.  
N. D. Morgane (See page, Libr. S. S. R. I., No. 1,  
Soviet Technical Science Library, No. 1, 1961, p. 361).  
M. discusses the influence of the  
internal resistance of the emitter on its secondary emission  
and concludes that the latter would depend also on the  
primary electron current. Preliminary exptl. results  
are described with various emitters which support this  
speculation.  
C. L. R.

CO  
2  
INVESTIGATION OF SURFACE HETEROGENEITY ON THE SURFACE OF  
CHROMIUM SPOTS. N. D. MARGOLIS AND B. I. DYATLOVSKAYA. *J. Russ. Phys. Chem. Soc.* 6, 230-  
301 (1898).—By the thermal ionization of Ne atoms, the  
surface heterogeneity of Cr films on W surfaces was  
studied. The distribution of the Cr spots is in accord with  
the Barlow-King theory; the Cr is probably adsorbed on  
certain spots, clearing the electron desorption work  $\phi$  from  
4.8 e.v. on the pure W surface to 3.4 e.v., while it is not at  
all adsorbed on other spots. The disagreement with the  
results of Becker (*Ann. Modern Phys.* 7, 110 (1934)), and  
Nottingham (*C. A.* 30, 3310) is due to the greater accuracy obtained by the use of atoms in place of electrons.  
F. H. RAUBMAN

Kiev Physical Inst., AS, USSR

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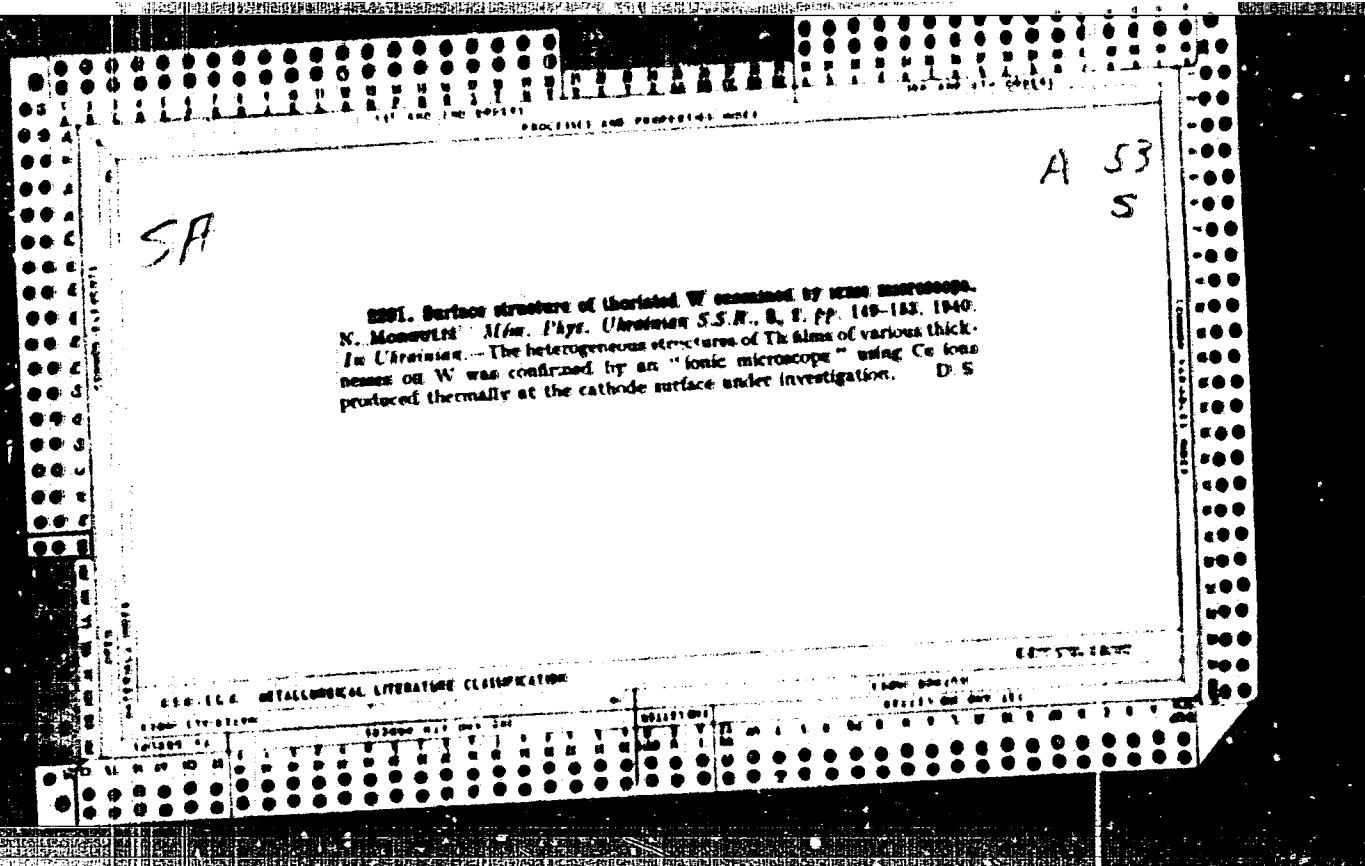
4678. Nature of Secondary Emission from Compound Kathodes.  
N. Mergullov. *J. Tech. Phys. U.S.S.R.* 9, 10, pp. 633-640, 1938. *In Russian.*—The author gives a theoretical discussion of the high secondary emission from compound cathodes (such as the silver, carbon, oxide type).  
D. R.

MORGULIS, N. D.

CATION ELEMENTS	1ST AND 2ND SERIES		PROCESSES AND PROPERTIES INDEX		3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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<p><b>Nature of the cathode sputtering and the kinetic emission of secondary electrons.</b> N. D. Morgulis. <i>J. Russ. Phys.-Chem. Phys.</i> (U.S.S.R.), 1959, 14(8) (1960); cf. C. A. 53, 4307, 8180.---M. analyzes phenomena associated with the impact of fast ions on the surface of a metal. Because of the high velocity the energy distribution of the metal atoms emitted due to ion bombardment does not correspond to the law for equal evapn. Cathode sputtering is a statistical act when sufficient interaction between the lattice atoms takes place so that any atom acquires sufficient energy to be emitted. The kinetic emission of secondary electrons for <math>V_s &lt; 2 e</math> cannot be an elementary thermoelectronic effect; owing to rapid cooling, electrons cannot obtain sufficient energy, the accommodation between ions and electrons is poor; <math>\Delta v &lt; \lambda_s^2</math> where <math>\Delta v</math> is the vol. of the locally hot spot, <math>\lambda_s</math> the free path of the electron. Using a mech. model consisting of 6000 steel spheres in a box with an electromagnet placed 170 cm. above from which steel-splice "ions" were dropped, M. found from 1200 photographic tracks of "emitted atoms" thus obtained, a distribution function for the energies externally resembling a Maxwell curve, although equal. was not established. The angle distribution curve differed somewhat from a cosine curve. Conclusions as to abs. yield and the role of structural factor are drawn. [F. H. R.]</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Neutralisation and ionisation on a chlorated tungsten surface. N. D. Mergul'ya, M. P. Koval'chenko and I. I. Stepanovskaya. J. Phys. (U. S. S. R.) 2, 25-38, 1960 (in English). The results of an exptl. investigation of the neutralisation of Cu and K ions and the ionisation of Cu, K and Na ions on the surface of chlorated W at different degrees of activation (0) and at different effective work functions ( $\phi$ ) are given. It was found that as  $\phi$  increased, the coeff. of neutralisation increased and the coeff. of ionisation decreased. It is concluded that the film on the W surface possessed a non-uniform (quilted) structure. Further work is in progress. 16 references. Frank Gant

Inst. of Physics, AS UkrSSR, Kiev.



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A

[Investigation of the surface structure of thoriated tungsten by means of an ion microscope] - N. G. Mergul'yan, J. F. Pelt, I. B. Slobod'ko, V. N. S. S. 16 10, tree 1948  
By use of the fact that thermal ionization of gas of alkali metals in contact with a W surface completely covered with Th is very small, as compared with that of pure W, it is possible to obtain the actual picture of the surface of the carbide made from thoriated W. The source of C was used in this exp. Results show that the film of Th on the surface of W is not uniform, leaving spaces of bare W.  
Rukavishnikov

**Radiation from antimony-copper cathodes.** N. D. Morello and B. I. Dyshlevitza. *J. Tech. Phys.* (U. S. S. R.) No. 50, 687-703 (1940).—The integral sensitivity of Sb-Cu cathodes ranges 60-80 microamp., per electron; this is considerably larger than that of O-Cu cathodes. The curve of spectral sensitivity lies in the visible part of spectrum, having the maximum at about 4800 Å, and the red limit at about 7800 Å.; this is very similar to the curve of eye sensitivity. The small value of thermoelectric emf of Sb-Cu cathodes makes their threshold much lower than that of O-Cu cathodes (the work function of Sb-Cu cathodes is 1.3 e. v., whereas for O-Cu cathodes it is only 6.8 e. v.). The spectral sensitivity could be changed by treating them with O or combining in the same layer with the O-Cu cathode. R. C.

1000 GENERAL LITERATURE CLASSIFICATION

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*Holmes & Associates*

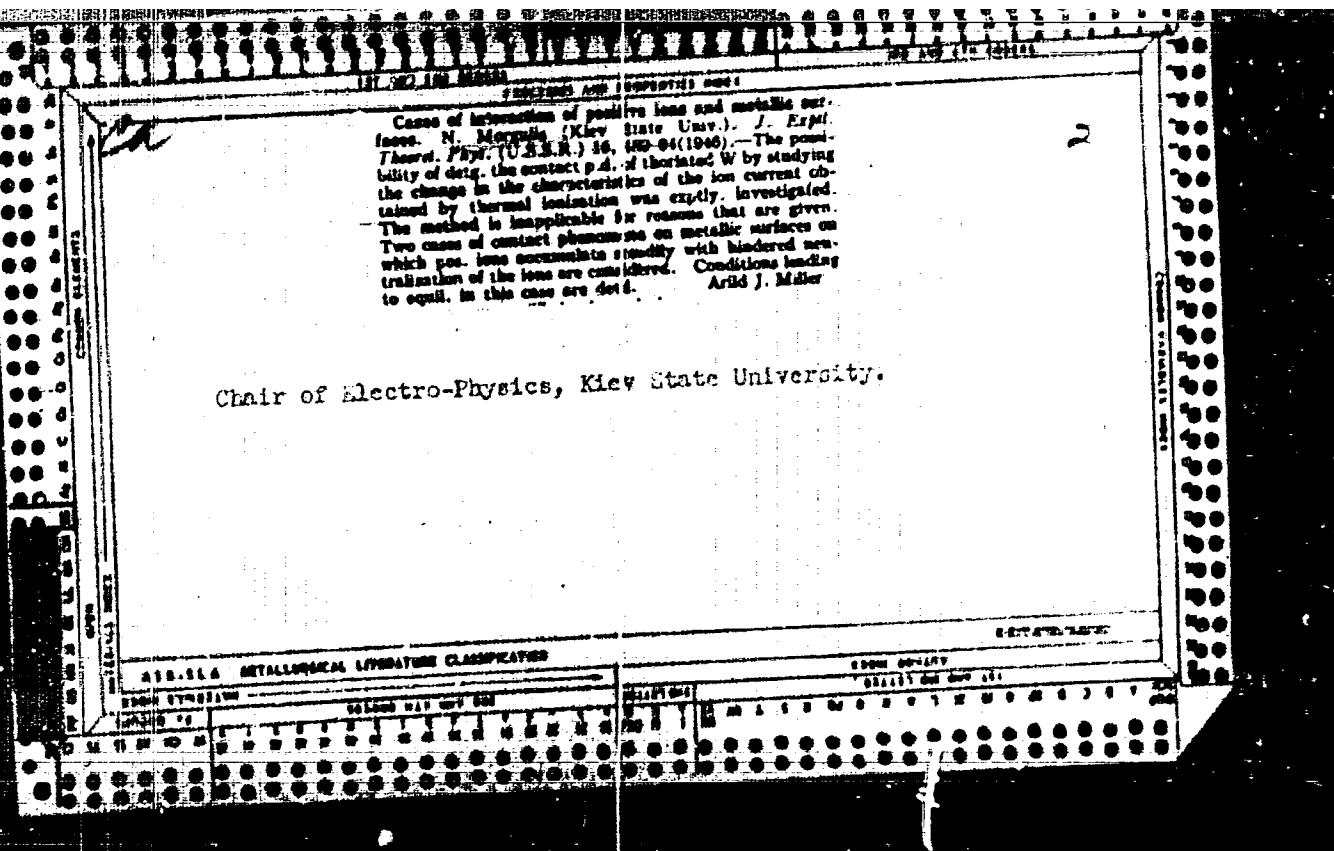
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PA-26T95

MORGULIS, N. D.

USSR/Physics

Electrons - Emission  
Cathodes, Oxide

Dec 1946

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"Zhur Tekh Fiz" Vol XVI, No 10

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26T95

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USSR/Cathodes  
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Nov 1946

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of incident monochromatic radiation  $\lambda = 630, 481, 434,$   
and 420 nm, measured by means of a Letica monochromator.  
M. McMahon

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GENERAL SUBJECTS

GENERAL SUBJECTS

RA 26712

MORGULIS, N.

USSR/Electronics

Jan 1947

Thermionic Emissions  
Electrons - Emission

"The Schottky Effect for Composite Semiconductor  
Electron Emitters," N. Morgulis, Institute of  
Physics, Academy of Sciences of the Ukrainian  
SSR, 4 pp

"Journal of Physics" Vol XI, No 1

A generalized theoretical treatment is given for  
emitters other than the usual metal ones. An  
important variation is found in Schottky's usual  
formula for metals.

26712

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